USMC AFV AND HYBRID VEHICLES

OBSTACLES

SOLUTIONS

GSA HONDA CIVIC HYBRID

- SUB-COMPACT VEHICLE WITH A BASE LEASE COST OF $148.00
- INCREMENTAL COST OF APPROX $9,000
- WET-LEASE MILEAGE COST OF APPROX. .08-.085 CENTS PER MILE
- SERVICE LIFE OF 4 YEARS (GSA LEASE TERM)
- NEEDS TO BE UTILIZED IN HIGH MILEAGE MISSIONS
- DIRECT IMPACT ON THE EXECUTIVE ORDER 13149 FUEL REDUCTION REQUIREMENT
- DOES NOT QUALIFY AS AN ALTERNATE FUELED VEHICLE

2005 FORD ESCAPE HYBRID

- MEETS THE NEED FOR SUV 4X4 CAPABILITY
- ADVERTISED TO BE CAPABLE OF 40 MPG
- FORD PLANS TO PRODUCE 20,000 UNITS IN 2005
- FORD HAS ORDERS FOR 30,000 UNITS
- HOPEFULLY, GSA WILL PROVIDE SOME UNITS TO DIFFERENT AGENCIES

OBSTACLES WITH HYBRIDS

- AVAILABILITY OF DIFFERENT CLASSES OF VEHICLES
- VERY HIGH INCRMENTAL COSTS
- PRODUCTION LIMITATIONS
- LONG RANGE MAINTENANCE COSTS
- ABILITY TO OBTAIN LARGER NUMBERS OF UNITS

POSSIBLE HYBRID SOLUTIONS

•GSA NEEDS TO EXTEND THE SERVICE LIFE TO SPREAD THE LOAD OF THE INCREMENTAL COST

•WE NEED TO LET THE MANUFACTURERS KNOW THAT WE NEED, AND WILL PROCURE HYBRID VEHICLES

•FIND LOCATIONS WHERE HIGH USAGE IN MILES IS REALIZED AND CONCENTRATE HYBRID VEHICLES IN THOSE AREAS. TAKE FULL ADVANTAGE OF THE TECHNOLOGY

•SHARE INFORMATION WITH OTHERS ABOUT POSSIBLE MAINTENANCE PROBLEMS AND HOW TO AVOID THEM.

WHAT IS THE REAL COST OF HYBRIDS

Hybrid Sedan Analysis

- 3200 Recruiting Station vehicles:
- Sur-Charge produces $384K: ($10 per month per vehicle)
- Incremental cost of Hybrid sedan $8,729:
- Sur-Charge procures 44 Hybrid sedans:
- Recruiters travel approx. 20K miles annually:

Compact sedan $168 monthly base lease + .105 cents per mile:

Sub-compact sedan $148 monthly base lease + .095 cent per mile;

Projected Hybrid costs

Sub-compact sedan $148 monthly base lease + .08 cents per mile:

Annual savings/ROI

- $240 annual in base lease cost each, $10,560 annual w/44 Hybrids:
- $1,500 annual per mile cost each, $66,000 annual w/44 Hybrids:
- $76,560 annual savings w/44 Hybrids:
- 552 annual gallons each, 24,288 annual gallons w/44 Hybrids:
- $1,740 annual savings per Hybrid sedan X 4 year service life = $6,960:
- $8,729 - $6,960 = $1,769 over 4 years = $442.25 per year $36.85 per month:

note:

miles per gallon calculations based on;

compact sedan 21 miles per gallon:

sub-compact Hybrid 50 miles per gallon:

Monthly/mileage costs are FY04 GSA lease costs:

E-85 FLEX-FUEL VEHICLES

•GSA PROVIDES A GOOD SELECTION OF E-85 POWERED SEDANS, PICKUPS, AND VANS

•INCREMENTAL COSTS ARE LOWEST OF ALL AFV's

•E-85 IS A BLEND OF 85% ETHANOLE 15% GASOLINE

•VEHICLE BURNS UNLEADED GASOLINE OR E-85

•USE OF E-85 VEHICLES AND FUEL DIRECTLY IMPACTS EXECUTIVE ORDER 13149 AND EARNS 1 AFV CREDIT TOWARDS EPAct 1992

OBSTACLES WITH THE USE OF E-85

- LACK OF INFRASTRUCTURE
- LACK OF FUNDS FOR INFRASTRUCTURE
- DESC IS JUST NOW COMING ON BOARD WITH ALTERNATE FUELS
- WHEN E-85 IS AVAILABLE, OPERATORS WILL NOT USE
- ENVIRONMENTAL ISSUES ON BOTH COASTS BLOCK CONSTRUCTION OF NEW FUEL SITES
- WHEN E-85 IS UTILIZED IT IS OFTEN NOT REPORTED FROM THE FUEL SITE

POSSIBLE SOLUTIONS

•LEADERSHIP NEEDS TO GET INVOLVED

•FIND WAYS TO “MAKE IT HAPPEN”, TEAM WITH ALL CONCERNED AND DEVELOP A “HOW CAN WE GET THIS DONE” ATTITUDE

•REQUIRE THE USE OF E-85 WHEN AN OPERATOR IS WITHIN 15 MILES OF A FUEL SITE

•PROVIDE THE NEEDED FUNDS TO CREATE INFRASTRUCTURE

FIX THE PROBLEM OF REPORTING OF THE FUEL USAGE

COMPRESSED NATURAL GAS

•COMPRESSED NATURAL GAS POWERED VEHICLES COMES IN TWO TYPES

•CNG DEDICATED, “2 AFV CREDITS” WILL ONLY USE CNG FUEL

•CNG2 “1 AFV CREDIT” IS A BIFUEL VEHICLE THAT WILL USE CNG OR UNLEADED GASOLINE

•CNG HAS A DIRECT IMPACT ON THE EXECUTIVE ORDER 13149

•CREDITS COUNT TOWARDS EPAct 1992

OBSTACLES WITH CNG VEHICLES

•INFRASTRUCTURE, VERY EXPENSIVE AND NEEDS NATURAL GAS

•REDUCED RANGE ON DEDICATED VEHICLES

•MANUFACTURES ARE NOT PRODUCING THE VEHICLES AS BEFORE

•MAINTENANCE OF FUEL SITE

•OPERATORS ARE RELUCTANT TO USE CNG IN CNG2 VEHICLES BECAUSE OF EXTENDED OR SLOW FUELING TIME

•CNG IS REPORTED TO BE IN SHORT SUPPLY

POSSIBLE SOLUTIONS TO CNG

•AGAIN, LEADERSHIP NEEDS TO BE INVOLVED

•REQUIRE THAT ONLY CNG DEDICATED VEHICLES ARE PROCURED

•INVEST IN THE UPKEEP AND DEVELOPMENT OF CNG INFRASTRUCTURE

•MANAGE REPLACEMENT CYCLES AND VEHICLES TO OPTIMISE THE BENEFITS OF CNG VEHICLES

•EDUCATE FROM THE TOP DOWN OF THE LASTING BENEFITS OF CNG

FUEL CELL VEHICLES

•CONVERTS A LIQUID/GASOUS FUEL (HYDROGEN) INTO ELECTRICITY

•THERE IS NO COMBUSTION IN THE PROCESS

•THE BY PRODUCT OF THE PROCESS IS WATER

•SINCE IT IS A DEDICATED ALTERNATE FUEL THERE SHOULD BE MULTIPLE AFV CREDITS

•HYDROGEN CAN BE EXTRACTED FROM ALL PETROLEIUM FUELS, EVEN WATER

•REFORMERS CAN BE INSTALLED AT HOME FOR REFUELING

OBSTACLES TO FUEL CELLS/HYDROGEN

- FEAR OF THE UNKNOWN
- COSTS OF INFRASTRUCTURE
- VEHICLES ARE VERY EXPENSIVE (UPWARDS TO $1M)
- VEHICLE PERFORMANCE IS EFFECTED BY WEATHER CONDITIONS
- AVAILABILITY OF VEHICLES
- SHOPS REQUIRE SPECIAL VENTING AND SAFETY MEASURES

POSSIBLE SOLUTIONS

•EDUCATE EVERYONE ON THE SAFE OPERATION OF FUEL CELLS

•INVOLVE LEADERSHIP IN GETTING VISION FOR THE FUTURE

•PARTNER WITH FORWARD THINKING ORGANIZATIONS WILLING TO SHARE THE COSTS

•BE WILLING TO ADAPT (CHANGE) TO THE FUTURE OF THE AUTOMOTIVE IDUSTRY

•TO SOME DEGREE WE MUST BE RISK TAKERS AND STEP OUTSIDE OF THE BOX

BIODIESEL (B-20)

•RENEWABLE FUEL

•EVERY 2,250 GALLONS OF B-20 EARNS 1 AFV CREDIT

•EVERY GALLON OF B-20 REDUCES DIESEL CONSUMPTION BY 20%

•MARINE CORPS EARNED 334 AFV CREDITS IN 2003 (FAST) WITH NO PROBLEMS

•EASY TO CONVERT A DIESEL TANK TO BIODIESEL USE

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